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TVET AND INDUSTRIALIZATION IN KENYA; A CASE STUDY OF NYANDARUA COUNTY

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Ngunjiri Elijah Mwangi.(2024). Tvet and Industrialization In kenya; A case study Of Nyandarua county. In: Mutembei Henry, Nduru Gilbert, Munyiri Shelmith, Gathungu Geoffrey, Kiboro Christopher, Otiso Wycliffe, Rithaa Jafford, Miriti Gilbert, Gichumbi Joel, Mwathi David, Gitonga Lucy, Nanua Jackin, Kahindi Roseline, Jonathan Kathenge & Muthui Zipporah (Eds.). Proceedings of the Chuka University Tenth Annual International Research Conference held in Chuka University, Chuka, Kenya from 5th to 6th October, 2023. 293-298 pp.

ABSTRACT

Many countries of the world have embraced TVET as the drive towards industrialization. Kenya government for instance is largely relying on Technical, Vocational education and Training in its endeavors to achieve the big four agenda on manufacturing, healthcare, food security and affordable housing and the larger vision 2030 of being a middle-income economy. In line with this, the government through the ministry of education has shown concerted efforts by introducing key reforms in TVET sector to drive the process of industrialization. Despite these efforts the Nyandarua county and Kenya at large continues to be confronted with food insecurity, poor housing for many citizens, poor healthcare and low manufacturing as evidenced by high importation. This study sought to fill this gap. The objective of the study was to find out the role of TVE in industrialization in Kenya. Descriptive research design was used. The target population was 500 trainees and 100 trainers drawn mainly from technical departments. Multi stage sampling was used to sample 50 trainees and 10 trainers respectively. Open and Closed ended questionnaires was used and which was self-administered. Data analysis technique used was descriptive statistics. The study concludes that TVET sector contributes to a low extent to manufacturing in Kenya with 60% respondents. Over 50% of the respondents acknowledged that TVET contribute insignificantly to universal health and food security in the country. The study concludes that TVET contributes significantly towards affordable housing in Kenya. The study recommends for investigation on the challenges TVET face in its endeavors towards meeting industrialization and the challenges addressed.

Keywords: *industrialization, Technical, Vocational Education and Training, trainers, trainees*

INTRODUCTION

Technical, Vocational Education and Training (TVET) have played a leading role towards industrialization in countries across the world. It is known to support skills knowledge and altitude necessary in achieving economic development. In Canada, Australia, United States and Germany, the TVET sector has played a significant role in industrialization and boosting the economy over years. In Asia, Singapore, Malaysia, South Korea, honking, Taiwan and china commonly known as the Asian tigers are known as the newly industrialized economies [NIEs}. This is as a result of significant role TVET have played (World Bank, 1991).

Many countries in Africa have begun imitating the Asian tigers by trying to embrace TVET and establishing key reforms in the TVET sector try and match those of the Asian tigers.

Ghana for example has engaged TVET to design strategies that promote economic growth, industrialization, development, poverty reduction, self-employment, self-reliance and job creation.

(Samuelet.al.,2013). In Nigeria, TVET is viewed as a sector that produces graduates in agriculture, design, operation of industries, forestry, textile, electrical works, iron and steel automotive and plastics health technology environmental design, all geared towards industrialization. (Aliyu & Dabban, 2009).

Kenya, like other countries embraced TVET as key driver towards the big four agenda of manufacturing, universal health care, food security, provision of affordable housing and industrialization. The government, with the hope of achieving this, introduced key reforms in TVET sector which includes; enactment of TVET act 2013, increasing funding on infrastructure, introducing capitation and higher education loans, introduction of TVETA authority to regulate TVET education, TVET- CDACC for assessment and certification among others.

Nyandarua County has four TVET institutions namely; Nyandarua national polytechnic, Kipipiri technical, kinangop technical and Ndaragwa technical. It is one of the counties with high agriculture potentials. However, Nyandarua county lag behind in terms of industrialization when compared to other counties of the former central province.

Industrialization is the process of converting raw materials, into finished goods. The finished goods are further categorized in to consumer and capital goods. It entails the application of scientific methods to provide solutions to the existing problems. Skilled labor is key in this process (Ekpo, 2005; Zurekas, 2001).

Countries in the world have used the skills acquired through TVET training in the process of industrialization. Notably among these countries are the Asian tiger countries which transformed from agrarian countries to newly industrialized economies.

Kenya has made tremendous reforms in the TVET sector with the hope to attain its big four agenda and industrialization therein just like the Asian tigers. These reforms include; increasing funding on infrastructure, introducing capitation and higher education loans, introduction of TVETA authority to regulate TVET education, TVET- CDACC for assessment and certification. However, despite all these key reforms in TVET, the country continues to suffer from food insecurity, poor health services, poor housing and low manufacturing of finished goods as evidenced by the high level of importation.

TVET training is defined as the training of technical manpower who have the ability to take initiative, facilitation and implementation of technological advancement. (Uwaifo, 2010).

Many countries have realized of the need to offer high quality and relevant TVET education. This has been attributed to the fact that TVET institution produce high caliber manpower useful in national development. (Bennah, 2000).

The role Technical and Vocational Education and Training (TVET) plays in a country is a key concern in many countries of the world. Global organizations such as the International Labour Organization (ILO), World Bank, and the United Nations Educational, Scientific and Cultural Organization (UNESCO), have acknowledged the role TVET sector plays in various economies.

UNESCO played a leading role in championing for TVET, and establishment of its key objectives during Seoul congress on the need to: provide TVET for all; orient TVET for sustainable development and; strengthen TVET as a major component of lifelong learning (UNESCO, 1999).

The African Union acknowledges that many of the young people leave school, and advocates for them to be integrated into non-formal learning, literacy systems and TVET. (African Union, 2007). Many countries in Africa perceive TVET as an important ingredient in minimizing the level of unemployment among the many school leavers at various academic levels

and hence reducing the rate of crime. It is the engine for developing skilled labor to help solve the challenges of the 21st century. (Afeti, 2010). The Asian Tigers are the Newly Industrialized Economies (NIEs) of South-East Asia. These countries which includes; Hong Kong, Malaysia, Taiwan and Singapore formulated and implemented successful and working policies and strategies in the TVET which has resulted in steady rise in number of high caliber skilled technical workforce for industrialization. In Africa, Ghana's TVET sector is seen as a tool towards development, poverty reduction, entrepreneurship, self-reliance, job creation and industrial growth. In Kenya TVET is viewed as the driver towards attainment of the big four agenda of the government and vision 2030 of Kenya being a middle level economy through industrialization. This has prompted the government to initiate several key reforms within the sector to assist in manufacturing, universal health care, attain food security and provide affordable and sustainable housing to its citizens. However, despite all these reforms, the said challenges remain to be unresolved. More so a large number of youths in the country remain to be jobless. The objective of the study is to find out the significance of TVET in industrialization in Kenya

METHODOLOGY

Research design is a conceptual structure used in conducting research. (Kothari, 2004). It is comprised of the blueprint used in collecting, measuring and analyzing of data. Descriptive research design was used. This design is used in preliminary and explanatory studies and enables the researcher to collect, summarize and interpolate data (Orodho, 2003).

The study population comprises of a whole group, elements and events of concerns to a researcher. This group has common observable characteristics and makes inferences based on sample statistics. It is a larger group from which the sample is taken (Sekaran & Bougie, 2009). The target population is the sum number of subjects of the study. The target population was 500 trainees who had earlier attended industrial attachment and 100 trainers drawn mainly from technical departments of the four TVET institutions in Nyandarua county as indicated in the Table 1.

Table 1; target population

Sn.no.	institution	Target population	
		trainees	Trainers
1	Nyandarua national	350	70

polytechnic			
2	Kipipiritvc	50	10
3	Kinangoptvc	50	10
4	Ndaragwa	50	10
	Total	500	100

Multistage sampling will be used to sample 50 trainees and 10 trainers respectively from the target population. Self-administered questionnaires were used in the procedure of collecting data. This is because they are relatively cheap for the study and convenient to the respondents in the sense that they can fill them in their own free time or when they have low workload (Hawkes & Rowe, 2008). Data analysis involved minimizing large data into a small manageable size, summarizing and applying statistical techniques on the data. Collected data was first edited, coded and finally entered to ensure its accuracy. Data entry enabled its further statistical operation and manipulation. Statistical Package on Social Science version 21.0 to assist in analyzing the data (Muijs, 2004). This version gives simple summary about the sample data (Orodho, 2003). The study used descriptive statistics in form of percentage. This enabled data to be presented and interpreted meaningfully

FINDINGS/ANALYSIS

Response rate

A total of 60 questionnaires were distributed. 50 to trainees who had earlier attended industrial attachments 50 to trainees and 10 to trainers from across the TVET institution Nyandarua County. A total of 50 questionnaires 42 from trainees and 8 from trainers were filled and returned. This formed a response rate of 83%. Mugenda and Mugenda (2003) states that when a rate of response is 50 percent, it is adequate, when 60 percent and above it is good, and when above 70 percent, it is very good.

Role of TVET in industrialization

Table 2; Extent in which TVET has contributed to the manufacturing sector in Kenya

	Frequency	Percentage
Lowest extent	5	10%
Low extent	30	60%

Average extent	10	20%
High extent	5	10%
Highest extent	0	0%
Total	50	100%

Majority of the respondents (60%) stated that TVET sector contributed to a low extent in manufacturing industries, with 10% acknowledging that TVET had contributed to manufacturing to the lowest extent. Only 10% believed VET had contributed to manufacturing to high extent while no respondent (0%) stated they had contributed to the highest extent to manufacturing.

Table 3; Extent in TVET has contributed to attaining the universal health care in Kenya;

	Frequency	Percentage
Lowest extent	25	50%
Low extent	20	40%
Average extent	5	10%
High extent	0	0%
Highest extent	0	0%
Total	50	100%

Majority of the respondents (50%) stated that TVET sector contributed to a lowest extent to universal health care, 40% lower extent and 10% to average extent. 0% believed TVET had contributed to high extent and highest extent to universal health care.

Table 4; Extent in TVET has contributed to enhance food security in Kenya;

	Frequency	Percentage
Lowest extent	28	56%
Low extent	12	24%
Average extent	7	14%
High extent	3	6%

Highest extent	0	0%
Total	50	100%

Majority of the respondents (56%) stated that TVET sector contributed to a lowest extent toward food security 24% to low extent and 14% to average extent. 6% and 0% stated that TVET contributed to food security in Kenya to high and highest extent respectively.

Table 5; Extent in which TVET has contributed in attaining affordable housing;

	Frequency	Percentage
Lowest extent	1	2%
Low extent	3	6%
Average extent	26	52%
High extent	19	28%
Highest extent	1	2%
Total	50	100%

Majority of the respondents (52%) stated that TVET sector contributed to an average extent toward affordable housing, 2% to lowest extent, 6% to low extent, 28% and 2% stated that TVET contributed to affordable housing in Kenya to high and highest extent respectively.

CONCLUSIONS

The study concludes that TVET sector contributes to a low extent to manufacturing industries in Kenya with 60% confirming the same. Its only 10% of the respondents acknowledged that TVET contributed to a high extent in manufacturing sector. The study further concludes that TVET contributes to a lowest and low extent to universal health care (with 50% and 40% respectively). no respondent believes TVET contributes to universal healthcare the study also concludes that TVET does not contribute significantly to food security in the country with only 6% acknowledging that TVET contributes averagely to food security. The study finally concludes that TVET contributes significantly towards affordable housing in Kenya.

RECOMMENDATIONS

The study recommends on the need for the government and the TVET sector to accelerate their participation towards the manufacturing industries. there is also the need to establish the obstacle of TVET towards manufacturing and address these challenges. The study further recommends of the need for TVET to get involved more on health matters and also establish why TVET contributes decimally to universal health care to address these challenges. In addition, the study recommends of the need to investigate why TVET does contribute significantly to food security. The study appreciates the significant role TVET plays in the construction of affordable housing in Kenya and further recommends for more reinforcement towards this to take advantage of the recent government move on affordable housing. Finally, the study recommends further studies on the challenges TVET face in its endeavors towards meeting the big four agendas and industrialization and the challenges addressed.

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Martins

Part A: General Information

Please specify your answer by putting a (v) on the answers provided

1. Institution { }
{ }

Nyandarua national poly Kinangop

Kipipiri Ndaragwa { }

2. Department Mechanical engineering { }

Electrical and electronic Building and civil engineering Applied sciences { }

Ict Agriculture { }

Any other (please specify)

3. Level of study Artisan { }

Craft Diploma Trainer { }

4. Gender

Male { } female { }

Part B role of TVET

The statement below concerns role of TVET in industrialization. On a scale of 1-5 (1 representing lowest, 2- low extent, 3-average, 4-high extent and 5 the highest extent), please Tick (✓) the one that best describe your opinion

No						
1	Extent in which TVET has contributed to Manufacturing sector in Kenya					
2	Extent in TVET has contributed to attaining the Universal health care					
3	Extent in TVET has contributed to enhance food security					
4	Extent in which TVET has contributed in attaining Affordable housing					